

Client:

NYSTA

Project:

NNYB Programming R4

Date:

2/18/19

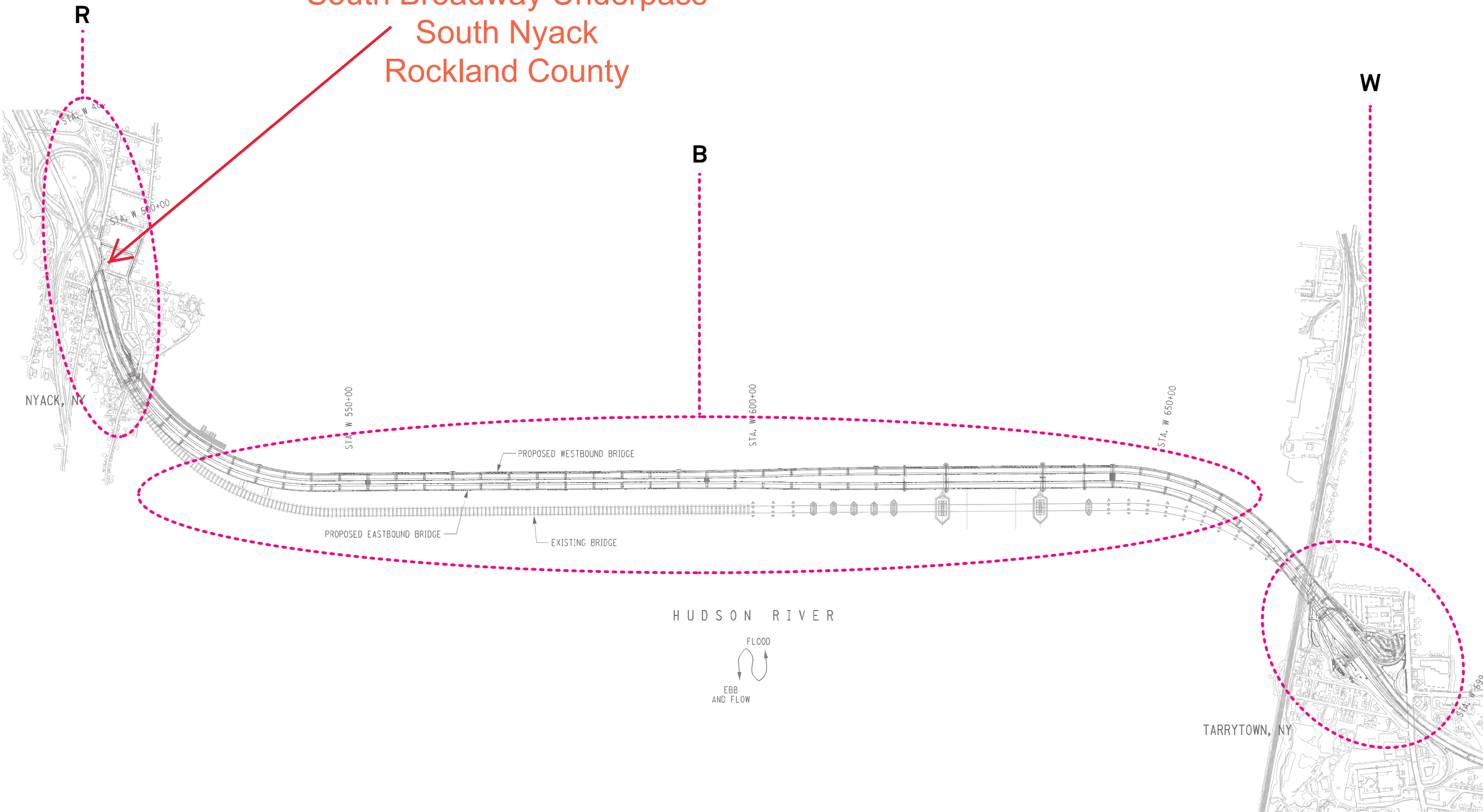
Designers:

JL/KB

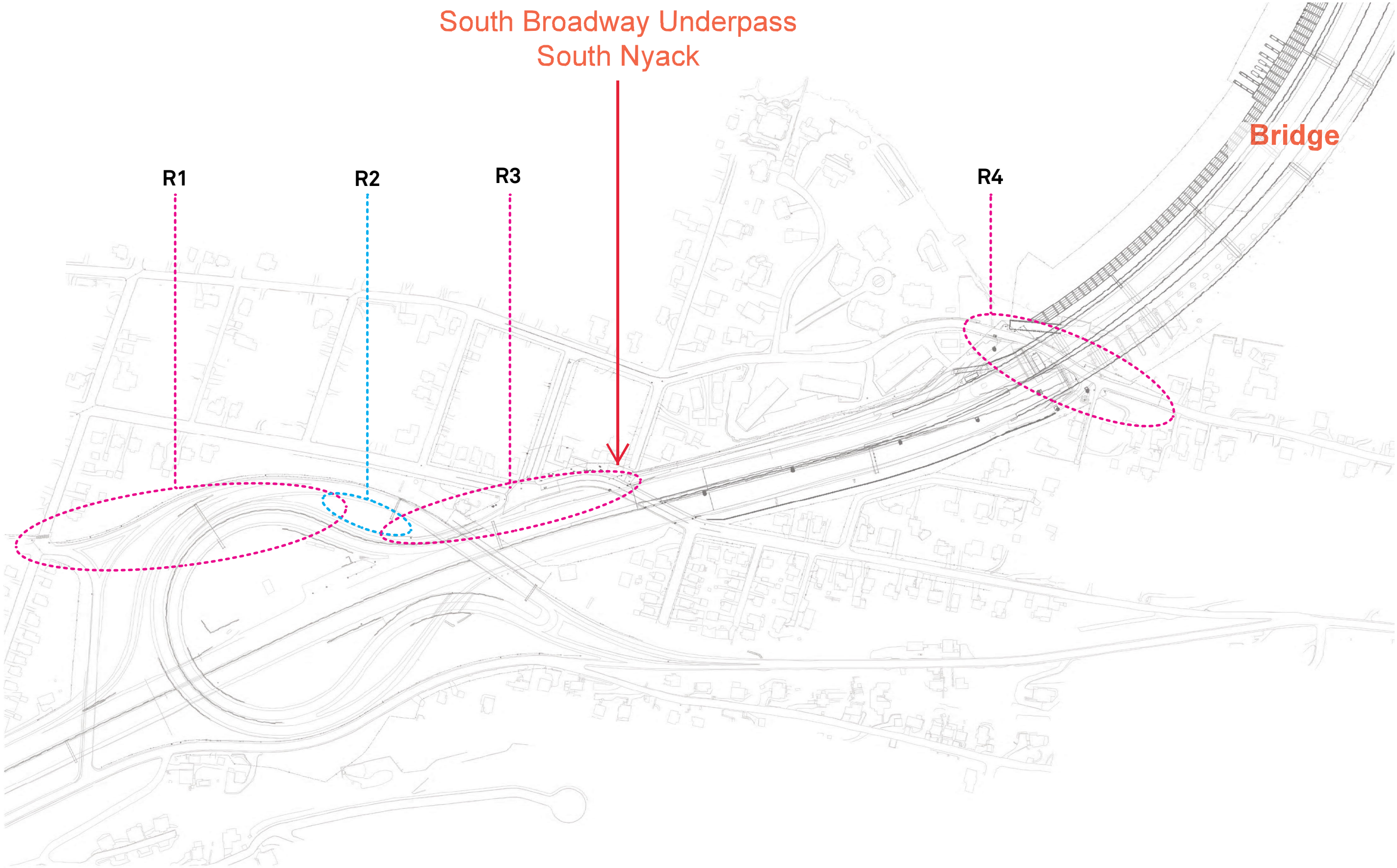
Key:

Wayfinding
Identification
Regulatory
Orientation
Interpretive
Informational

Mural Location
South Broadway Underpass
South Nyack
Rockland County



Mural Location
South Broadway Underpass
South Nyack



exit

One Penn Center, Suite 1665
1617 JFK Boulevard
Philadelphia, PA 19103
main 215.561.1950
www.exploreexit.com

Client:

NYSTA

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NNYB Programming R4

Date:

2/18/19

Designers:

JL/KB

Key:

- Wayfinding
- Identification
- Regulatory
- Orientation
- Interpretive
- Informational

Rockland
Signage
Key Plan

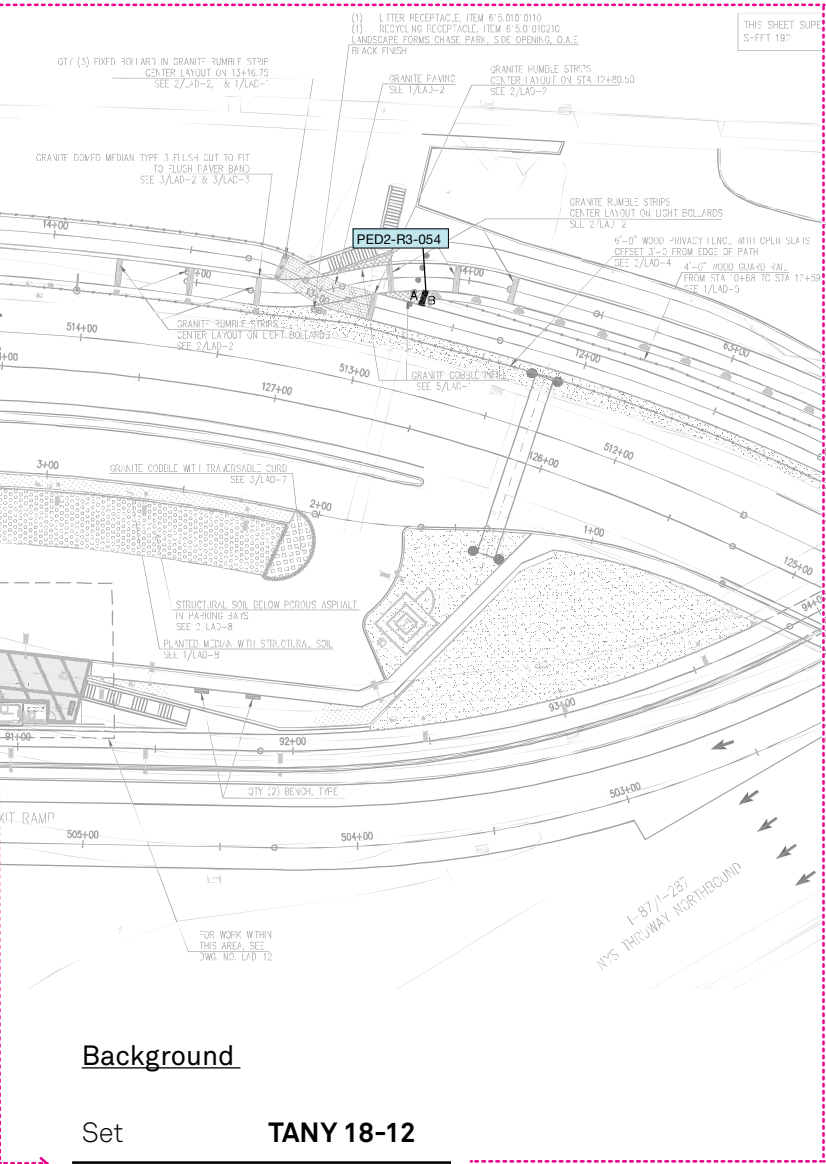
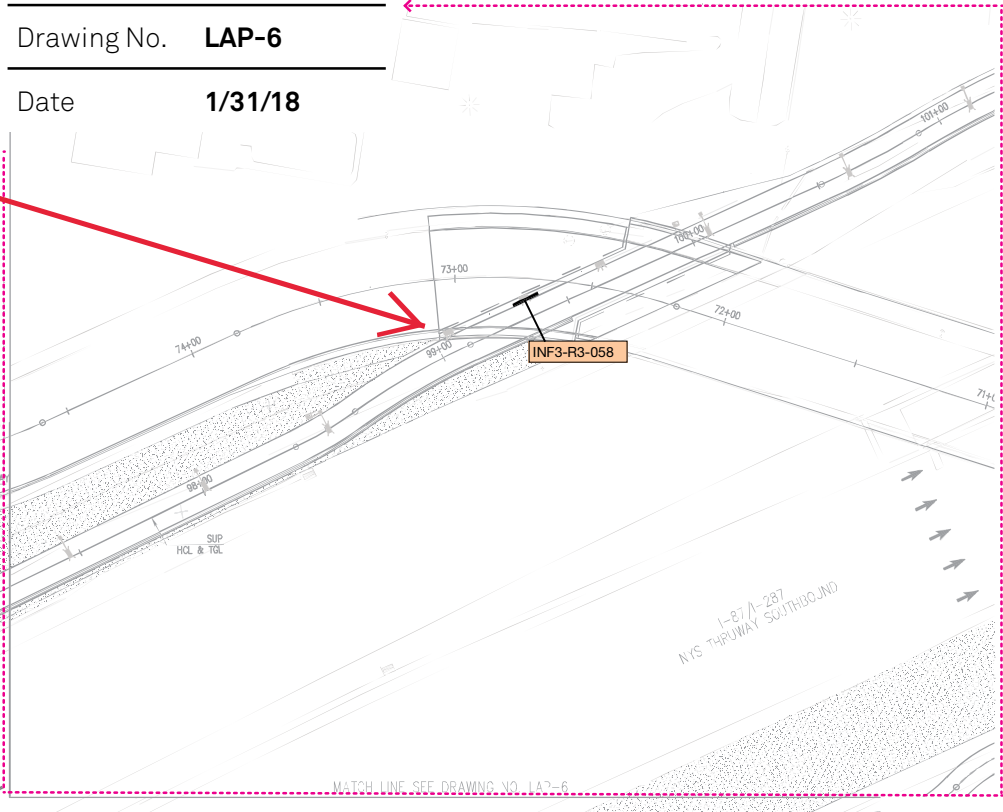
R0

Sheet 2 of 20

Mural Location
South Broadway Underpass
South Nyack

Background

Set	TANY 18-12
Drawing No.	LAP-6
Date	1/31/18



Background

Set	TANY 18-12
Drawing No.	LAP-4
Date	3/16/18

Background

Set	TANY 18-12
Drawing No.	LAP-5
Date	1/31/18

exit

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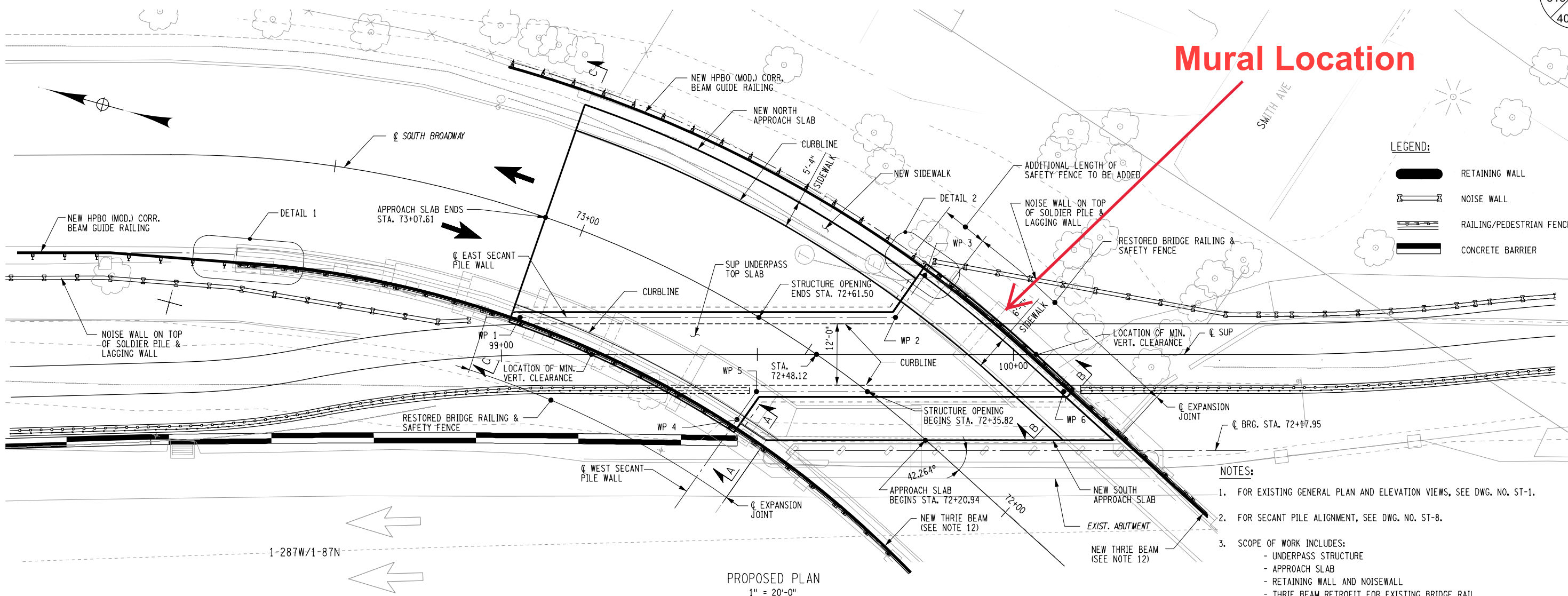
Wayfinding
Identification
Regulatory
Orientation
Interpretive
Informational

Rockland
Spur Path +
Underpass

R3

Sheet 5 of 20

Mural Location

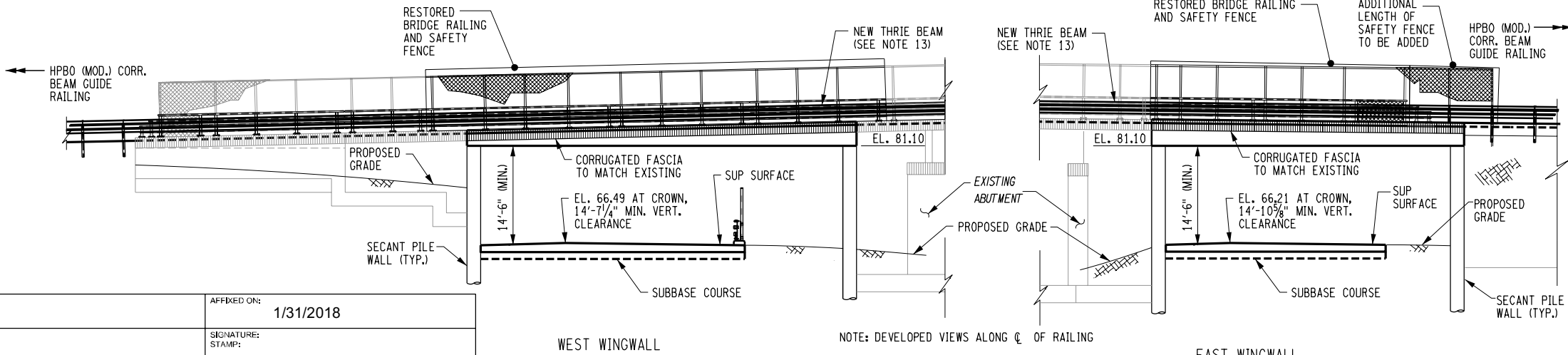
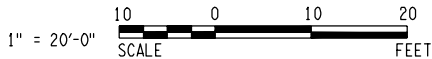


LEGEND:

- RETAINING WALL
- NOISE WALL
- RAILING/PEDESTRIAN FENCE
- CONCRETE BARRIER

NOTES:

- FOR EXISTING GENERAL PLAN AND ELEVATION VIEWS, SEE DWG. NO. ST-1.
- FOR SECANT PILE ALIGNMENT, SEE DWG. NO. ST-8.
- SCOPE OF WORK INCLUDES:
 - UNDERPASS STRUCTURE
 - APPROACH SLAB
 - RETAINING WALL AND NOISEWALL
 - THRIE BEAM RETROFIT FOR EXISTING BRIDGE RAIL
- FOR TYPICAL CROSS SECTION OF SUP UNDERPASS STRUCTURE, SEE DWG. NO. ST-14.
- FOR SOLDIER PILE AND LAGGING WALL AND NOISE WALL ELEVATIONS AND SECTIONS, SEE DWG. NOS. WAL-1 THROUGH WAL-23.
- FOR APPROACH SLAB PLANS, SEE DWG. NOS. ST-19 AND ST-20.
- FOR GRADING AND LIMITS OF RETAINING WALLS, REFER TO PROFILE DRAWINGS AND GENERAL PLANS.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN PRIOR TO PREPARING SHOP DRAWINGS.
- FOR WORKING POINT DATA, SEE DWG. NO. ST-8.
- FOR DETAILS 1 AND 2, SEE DWG. NO. ST-21.
- FOR SECTION A-A AND SECTION B-B, SEE DWG. NO. ST-13.
- FOR SECTION C-C, SEE DWG. NO. ST-12.
- THRIE BEAM SHALL BE USED TO RETROFIT THE FULL LENGTH OF EXISTING BRIDGE RAILING. TRANSITION TO HPBO (MOD.) CORRUGATED GUIDE RAIL SHALL BEGIN BEFORE THE APPROACHES TO AND FROM THE STRUCTURE. THE CONTRACTOR IS ALERTED TO THE EXISTENCE OF LEAD PAINT ON THE EXISTING BRIDGE RAIL AND SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN A SAFE WORKING ENVIRONMENT WHEN WORKING ON OR AROUND THE EXISTING BRIDGE RAIL.



ELEVATION VIEW
1" = 20'-0"

WEST WINGWALL

EAST WINGWALL

NOTE: DEVELOPED VIEWS ALONG C OF RAILING

ALTERED ON:	AFFIXED ON:
SIGNATURE:	1/31/2018
STAMP:	

STATE OF NEW YORK
JINIL NOH
LICENSED PROFESSIONAL ENGINEER
090286

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

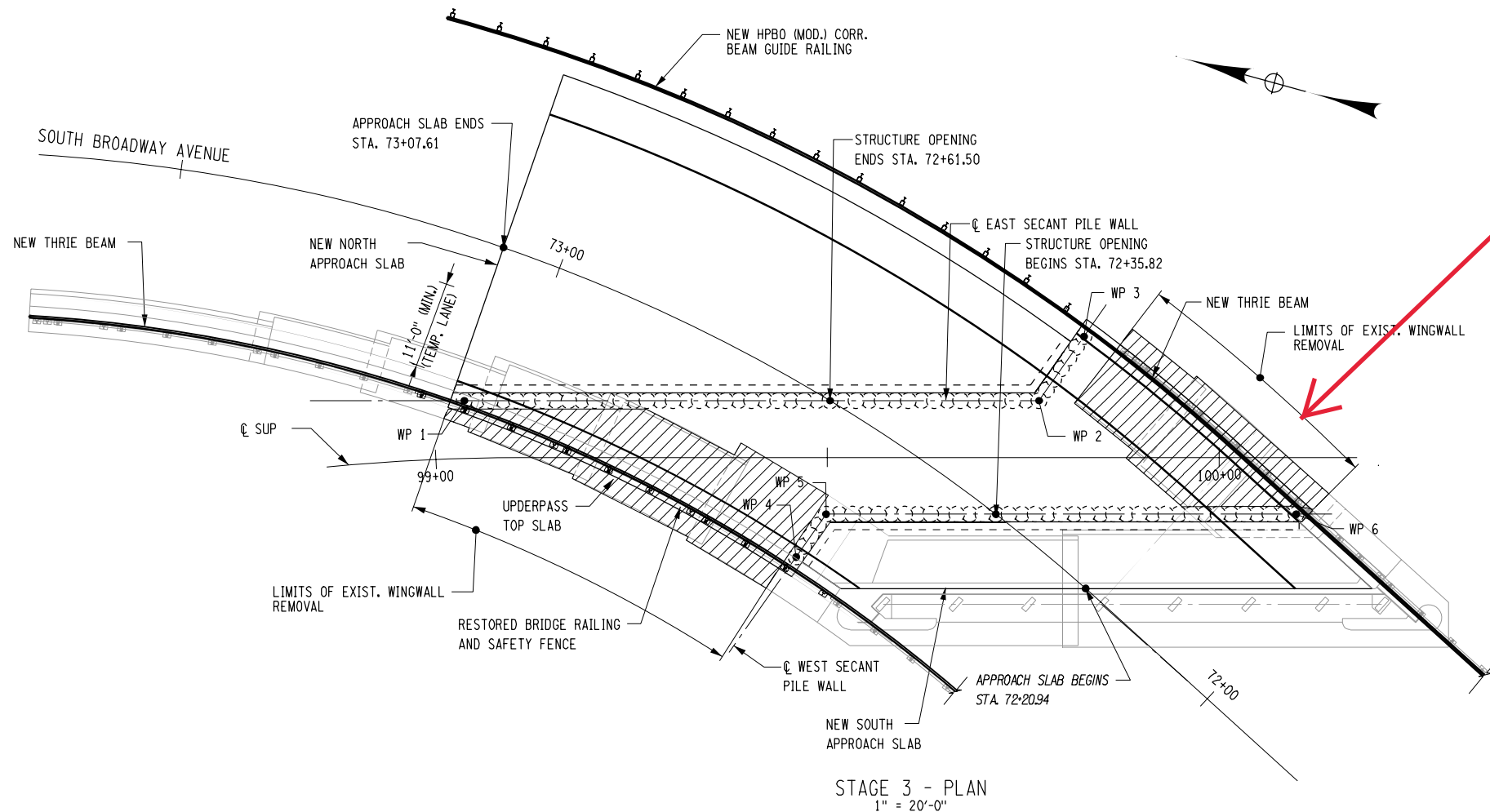


NEW YORK
STATE OF OPPORTUNITY.
Thruway
Authority
Empire State Building
350 Fifth Avenue, 57th Floor
New York, New York 10118

TITLE OF PROJECT
NEW NY BRIDGE
ROCKLAND LANDING SHARED USE PATH
LOCATION OF PROJECT
MILEPOST 16.75
NEW YORK DIVISION
TITLE OF DRAWING
PROPOSED GENERAL PLAN
AND ELEVATION VIEW
(SUP UNDERPASS STRUCTURE)

CONTRACT NUMBER:
D214583
DATE:
1/31/18
DRAWING NUMBER:
ST-2

J. NOH
CHECKED BY:
P. ELLA
DRAFTED BY:
C. QUAGLIA
CHECKED BY:
J. NOH
DESIGNED BY:
P. KRISTIANSEN
DESIGN SUPERVISOR:



Mural Location

STAGE 3 CONSTRUCTION:

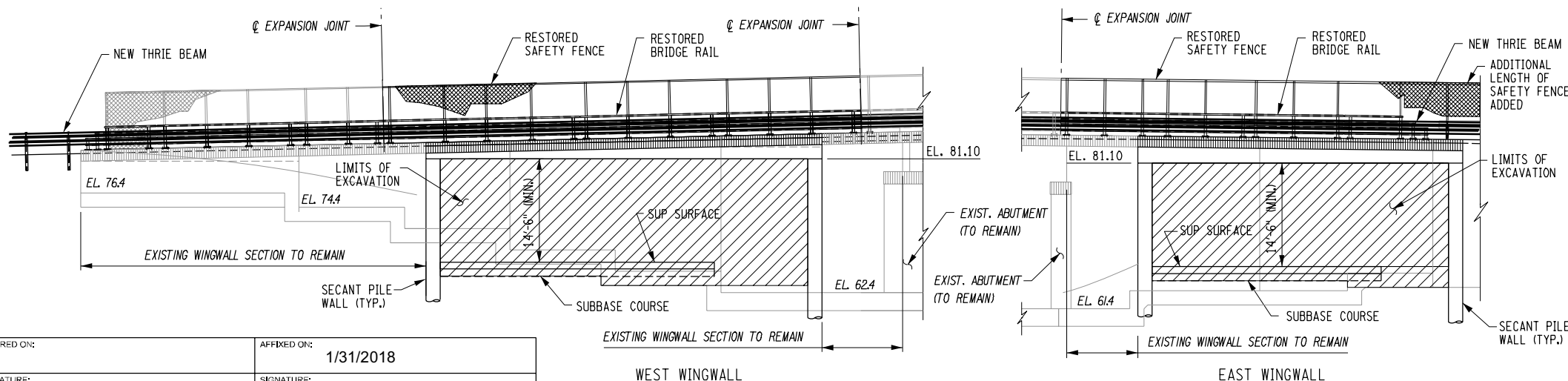
- 3-1. REMOVE EXISTING WINGWALL AND WINGWALL SUBSTRUCTURE (ITEM 202.19) AS INDICATED.
- 3-2. REPAIR DAMAGED WINGWALLS (ITEM 555.0105). (SEE VIEW A-A ON DWG. NO. ST-11)
- 3-3. EXCAVATE THE UNDERPASS INTERIOR BETWEEN SECANT PILE WALLS (ITEM 206.01) TO ELEVATION 64.49 AT THE WEST WINGWALL AND 64.21 AT THE EAST WINGWALL.
- 3-4. FINISH INTERIOR WALL FACES AND CONSTRUCT SUP SLAB UNDER THE UNDERPASS STRUCTURE.

LEGEND:

- LIMITS OF EXISTING STRUCTURE REMOVAL / LIMITS OF EXCAVATION
- SECANT PILE WALL

NOTES:

1. FOR SECANT PILE ALIGNMENT, SEE DWG. NO. ST-8.
2. FOR WORKING POINT DATA, SEE DWG. NO. ST-8.
3. FOR SECANT PILE WALL LAYOUTS, SEE DWG. NO. ST-9 AND ST-10.
4. BEFORE INSTALLATION OF NEW THRIE BEAM RETROFIT, THE CONTRACTOR SHALL ALERT THE ENGINEER OF ANY SIGNIFICANT DETERIORATION TO AN ANCHORAGE TO REMAIN. THESE RAILING POST ANCHORS SHALL BE DEEMED ADEQUATE BY THE ENGINEER BEFORE ATTACHING NEW THRIE BEAM. REPLACE ANCHOR BOLTS AS DIRECTED BY THE ENGINEER PER ITEM 586.17340125. THE CONTRACTOR IS ALERTED TO THE EXISTENCE OF LEAD PAINT ON THE EXISTING BRIDGE RAIL AND SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN A SAFE WORKING ENVIRONMENT WHEN WORKING ON OR AROUND THE EXISTING BRIDGE RAIL.
5. FOR TYPICAL CROSS SECTION OF UNDERPASS STRUCTURE, SEE DWG. NO. ST-14.

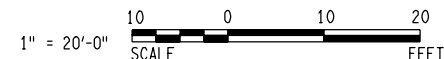


ALTERED ON:	AFFIXED ON: 1/31/2018
SIGNATURE: STAMP:	SIGNATURE: STAMP:

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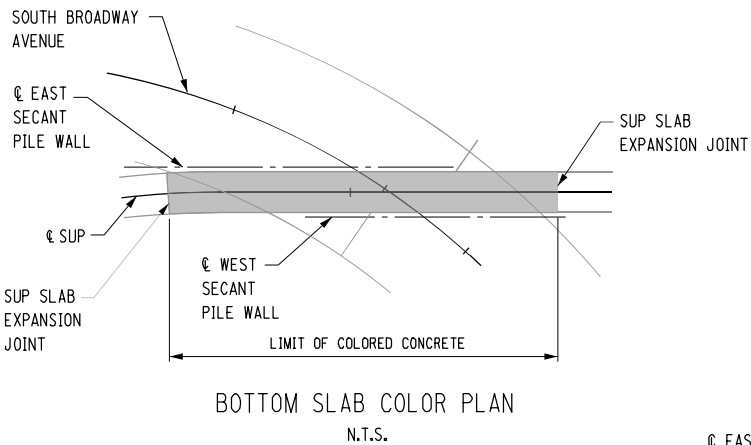
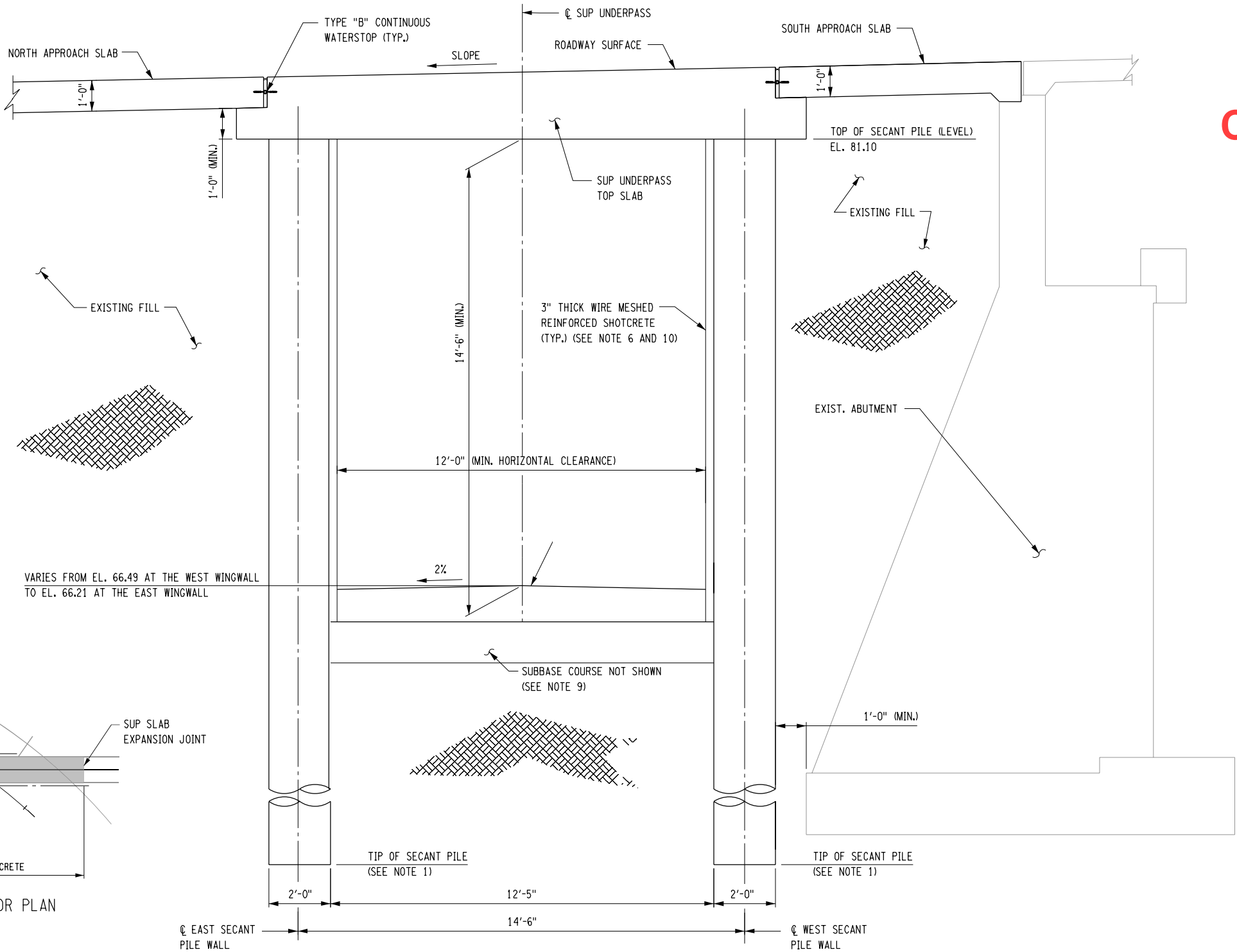
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

 Thruway Authority	TITLE OF PROJECT NEW NY BRIDGE ROCKLAND LANDING SHARED USE PATH	CONTRACT NUMBER: D214583
	LOCATION OF PROJECT MILEPOST 16.75 NEW YORK DIVISION	DATE: 1/31/18
 Empire State Building 350 Fifth Avenue, 57th Floor New York, New York 10118	TITLE OF DRAWING SUGGESTED CONSTRUCTION STAGING PLAN - 5 OF 5 (SUP UNDERPASS STRUCTURE)	DRAWING NUMBER: ST-7



Underpass Cross Section

- NOTES:
- FOR SECANT PILE WALL LAYOUTS AND SECANT PILE TIP ELEVATIONS, SEE DWG. NOS. ST-9 & ST-10.
 - FOR SUP UNDERPASS TOP SLAB REINFORCEMENT, SEE DWG. NOS. ST-17 & ST-18.
 - FOR SUP SLAB REINFORCEMENT, SEE DWG. NO. ST-24.
 - FOR SUGGESTED CONSTRUCTION STAGING, SEE DWG. NOS. ST-3 THROUGH ST-7.
 - THE CONTRACTOR SHALL SUBMIT THE MEANS AND METHODS FOR INSTALLATION OF THE SECANT PILE WALL SYSTEM FOR REVIEW AND APPROVAL.
 - ALL EXPOSED INTERIOR FACES OF SECANT PILE WALLS SHALL BE PREPARED PER SPECIFICATION ITEM 583.17340125 - SHOTCRETE COVERING FOR SECANT PILE WALLS).
 - FOR GENERAL NOTES, SEE DWG. NOS. GNN-1 THROUGH GNN-4.
 - FOR TYPICAL SECANT PILE REINFORCEMENT DETAIL, SEE DWG. NO. ST-15.
 - MINIMUM THICKNESS FOR SUBBASE COURSE SHALL BE 1'-0".
 - SHOTCRETE WALLS (ITEM 583.17340125) TO BE SMOOTH STEEL TROWEL FINISHED.
 - CONCRETE FOR BOTTOM SLAB SHALL BE COLORED CHARCOAL BLACK USING PIGMENTS IN ACCORDANCE WITH ASTM C979. SUBMIT HARDENED CONCRETE SAMPLES FOR APPROVAL. SEE PLAN FOR LIMITS. WORK SHALL BE PAID UNDER ITEM 555.17340125.



TYPICAL CROSS SECTION OF UNDERPASS STRUCTURE
(LOOKING UPSTATION)
1/4" = 1'-0"



ALTERED ON:

SIGNATURE:
STAMP:

AFFIXED ON:
3/16/2018

SIGNATURE:
STAMP:

DESIGNED BY:
J. NOH

CHECKED BY:
P. ELLA

DRAFTED BY:
C. QUAGLIA

CHECKED BY:
J. NOH

DESIGNED BY:
P. KRISTIANSEN

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

Thruway Authority

Empire State Building
350 Fifth Avenue, 57th Floor
New York, New York 10118

TITLE OF PROJECT
NEW NY BRIDGE
ROCKLAND LANDING SHARED USE PATH

LOCATION OF PROJECT
MILEPOST 16.75
NEW YORK DIVISION

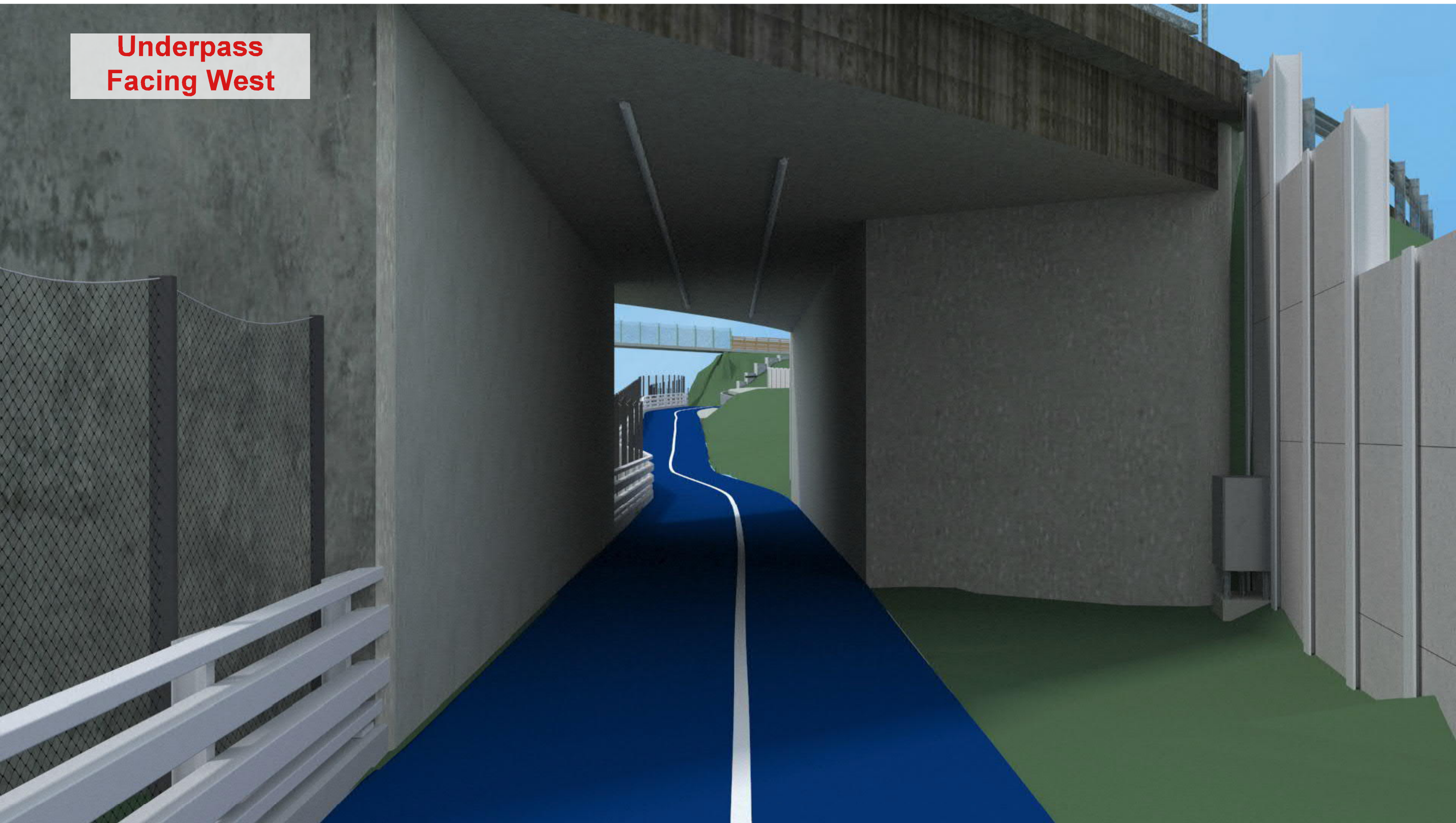
TITLE OF DRAWING
TYPICAL CROSS SECTION
(SUP UNDERPASS STRUCTURE)

CONTRACT NUMBER:
D214583

DATE:
3/16/18

DRAWING NUMBER:
ST-14

**Underpass
Facing West**



**Underpass
Facing East**



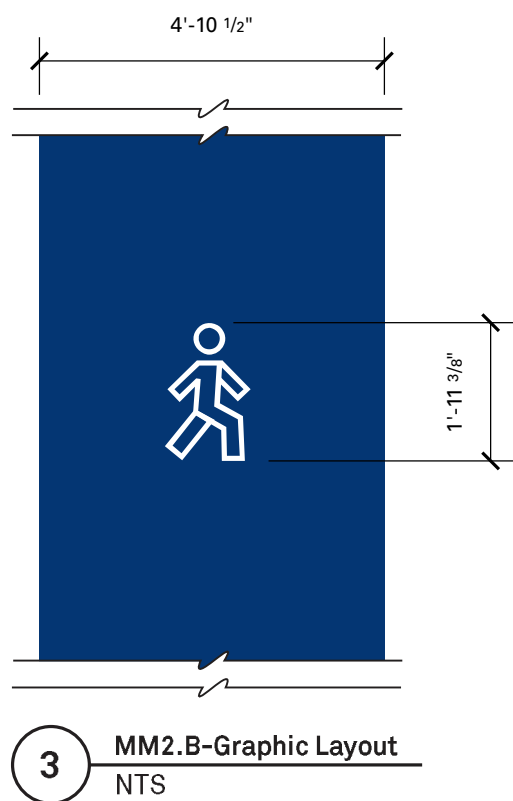
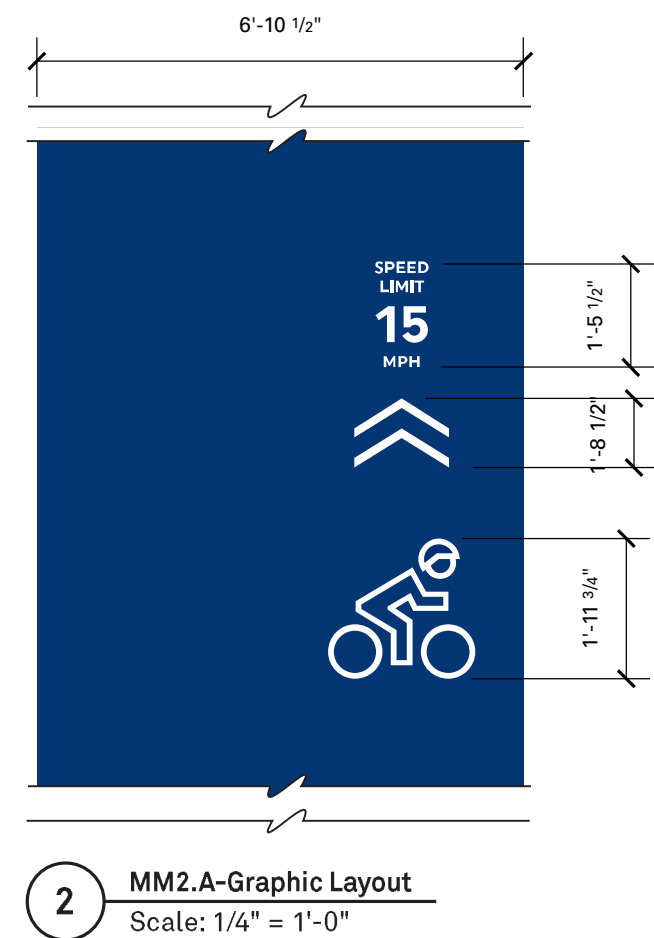
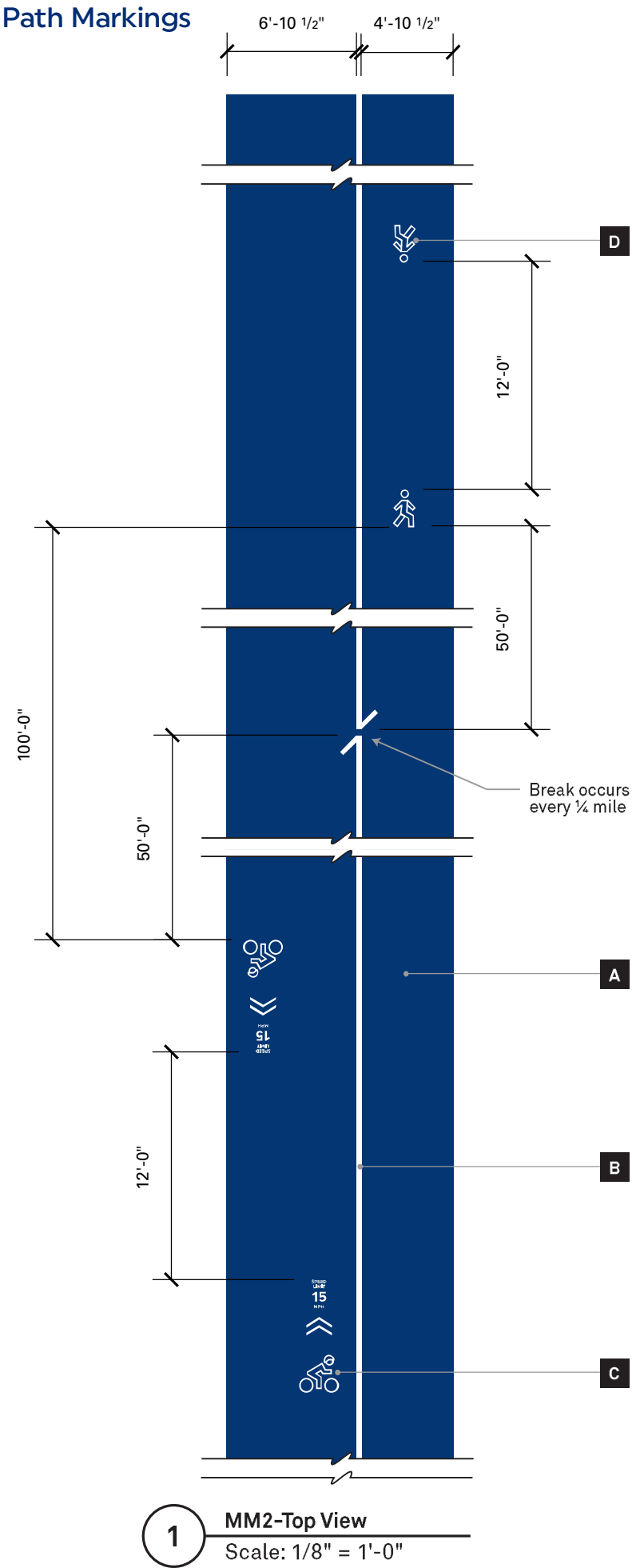
Mural Location
South Broadway Underpass
South Nyack



Mural Location
South Broadway Underpass
South Nyack



Path Markings



Shared Use Path Color



4 MM2-Drop In (for reference only)
Scale: NTS

- A Path Surface**
Transpo Color Safe Durable Paint Marking
Path = PMS 288C (brand blue)
Path markings = White
Graphics provided by Designer
- B Lane Divider line**
3" thk.
Break occurs every 1/4 mile
- C MM2.A (Biker + Speed Limit)**
Pair of icons spaced 12'-0" apart
MM2.A icons spaced 100'-0" apart
from MM2.B icons
- D MM2.B (Walker)**
Pair of icons spaced 12'-0" apart
MM2.B icons spaced 100'-0" apart
from MM2.A icons

exit

1617 JFK Blvd.
Suite 1665
Philadelphia, PA 19103
215.561.1950
info@exploreexit.com

DESIGN INTENT PACKAGE 95%

OWNER ADDRESS

DATE

12/18/18

PROJECT NAME AND ADDRESS

PROJECT #

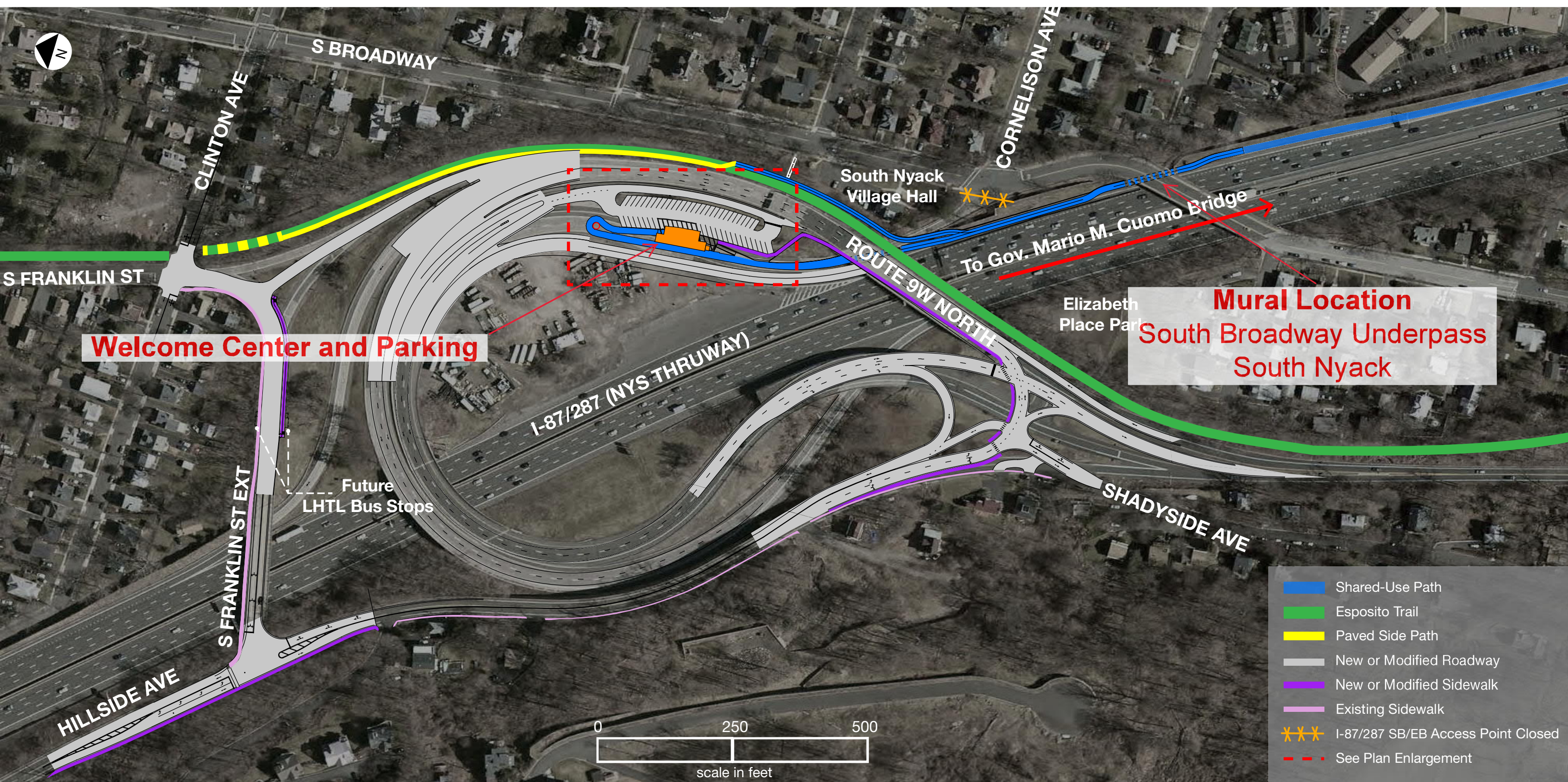
The New York State Thruway

116105

DRAWN

KB/JL

REVISION DATE AND DESCRIPTION	
These drawings express design intent only and are not for construction.	
Fabricator is responsible for: Final design and engineering of components indicated, including all aspects of mounting, erection, anchoring and attachment. Structural integrity, electrical function and connections to power and communications sources to satisfy Owner's requirements. Coordination with contractor and other trades, including but not limited to: lighting, structural, communications and landscaping schemes. Verification of conditions in field prior to submission of shop drawings and samples. If conditions warrant installation change or relocation of sign, shop drawings and elevations are to be submitted, with proposed changes, to Designer and Owner for review and approval. Submittals for approval by Designer and Owner prior to fabrication and installation, including but not limited to: shop drawings with seal of registered engineer and samples of materials, colors applications and finishes.	
SIGN TYPE #	SIGN TYPE DESCRIPTION
MM2	Path Markings
SHEET TITLE	
Elevations & Details	
SECTION	SHEET NO.
3 Design Intent Drawings	66



Welcome Center and Parking

Mural Location
South Broadway Underpass
South Nyack

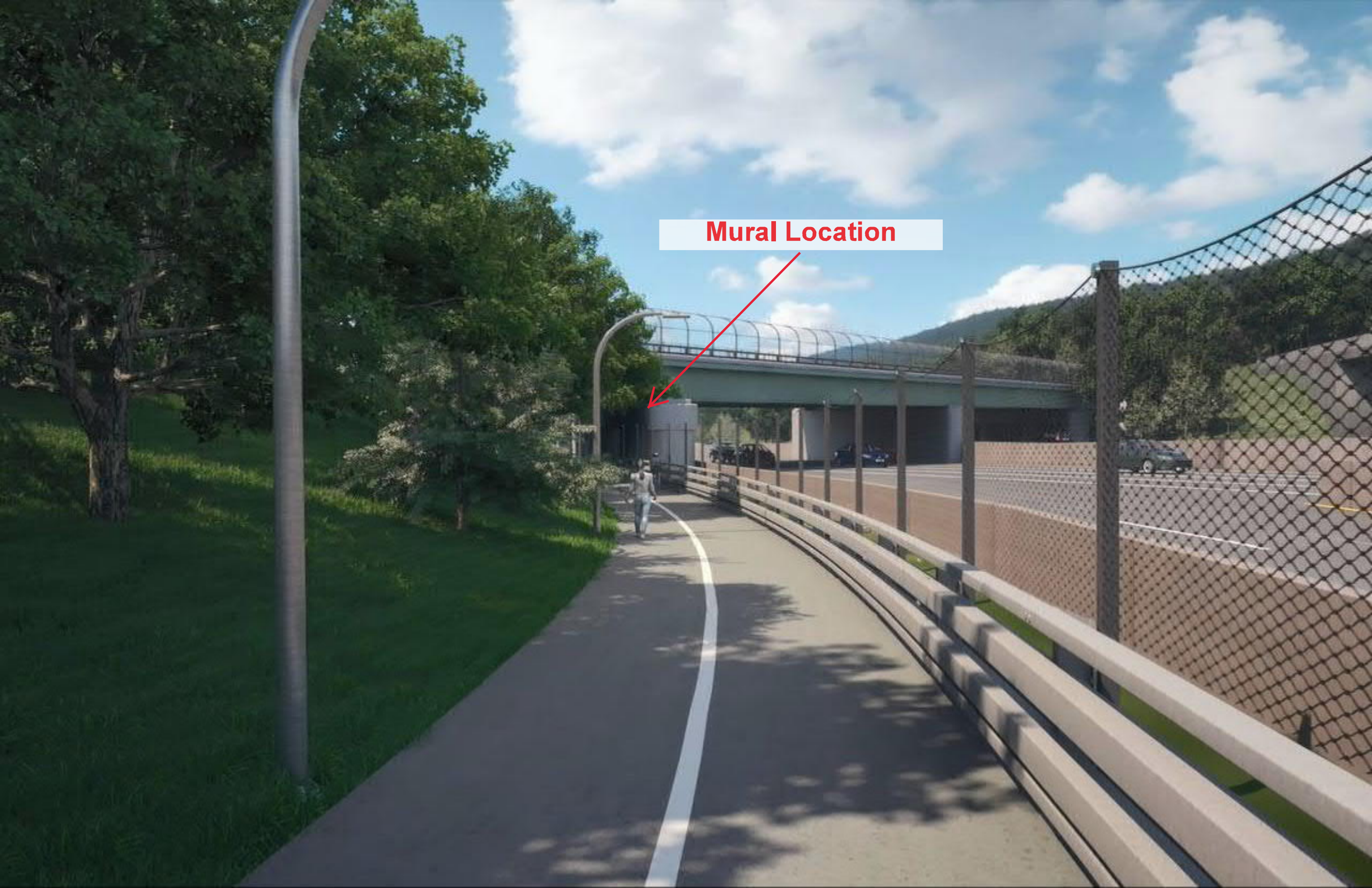
- Shared-Use Path
- Esposito Trail
- Paved Side Path
- New or Modified Roadway
- New or Modified Sidewalk
- Existing Sidewalk
- I-87/287 SB/EB Access Point Closed
- See Plan Enlargement

An aerial architectural rendering of a proposed development. The scene features a large, paved parking lot on the right, with several cars parked. To the left of the parking lot is a building with a stone and wood exterior, a covered walkway, and a roof with solar panels. A set of stairs leads down from the walkway to a lower level. A red arrow points from a text box to a spot on the lower level. The background shows a green field, a road, and distant hills.

Rockland Landing Welcome Center and Parking

Mural Location

Mural Location



OVERLOOKING THE HUDSON

Pedestrians and bicyclists on the new bridge's shared-use path will be able to take in views of the Hudson River Valley from six scenic overlooks that reflect different aspects of the region's culture and history.

1



"FISH AND SHIPS"

Fish & Ships celebrates the waterfront history of the Nyacks (NAY-ACK is the Native American term for "fishing place.") The timber-clad stainless steel benches of this overlook call to mind a school of fish, while the shade structure takes its inspiration from Nyack's shipbuilding history.

2



"PALISADES"

Highlighting the unique geology of the region, **Palisades** features a multifaceted granite bench that evokes the namesake cliffs rising steeply above the western bank of the river. Sunlight is filtered through the overlook's perforated shade structure, mimicking the shadows created by the nearby forest canopy.

3



"PAINTERS POINT"

Mirroring the muse-like qualities of the Hudson River that have inspired artists throughout the years, **Painters Point** features an integrated bronze and wood shade structure/seating element that serves as both a viewing frame of the river and Hook Mountain, but also a stage, encouraging impromptu performance. A stepped prow with steel grating provides visitors with views of the river directly below.

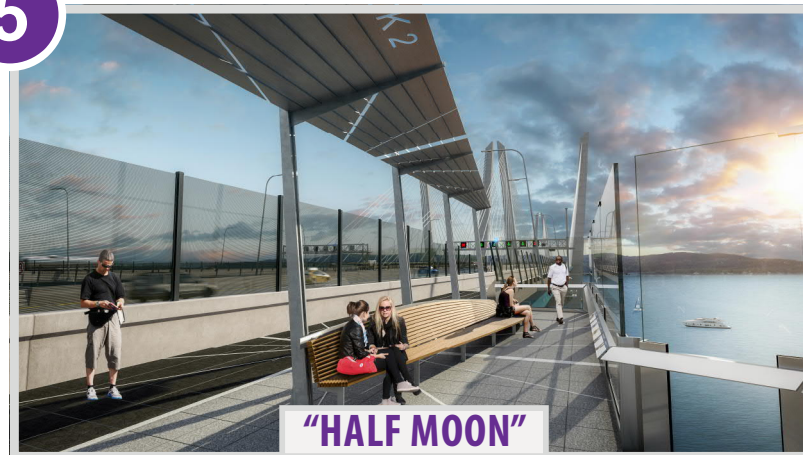
4



"RIVER CROSSING"

Located approximately halfway across the river, this overlook focuses on the historical connection and modes of transportation between the villages of Nyack and Tarrytown before, during and after the Tappan Zee Bridge. **River Crossing** also features a "prow" and inlaid lettering pointing to shoreline landmarks. The lattice detail of the canopies and oval cutouts in the benches are a nod to the former span.

5



"HALF MOON"

This overlook, located adjacent to the river's navigation channel and named after the ship captained by Henry Hudson in 1609, speaks to the region's nautical history. **Half Moon** features a "prow" with steel grating allowing for direct views of the river below, a curved timber bench, and compass lines in the canopy and granite pavement.

6



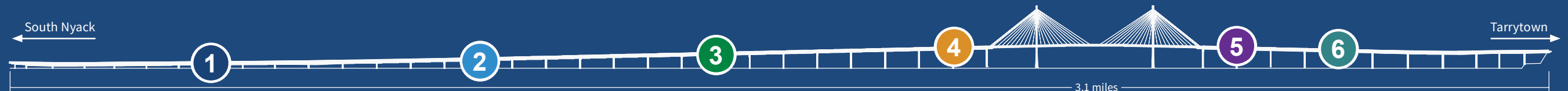
"TIDES OF TARRYTOWN"

"Tides of Tarrytown" is a reference to both the rich history of the village and the changes to its shoreline over time. This overlook features timber-clad terraced seating that also functions as an elevated viewing platform. The mirror polished stainless steel canopy overhead captures and reflects unobstructed views of the Manhattan skyline to the south.

Bridge Overlook Themes

THE GOVERNOR MARIO M. CUOMO BRIDGE FULL PROFILE

● = overlook location



1. **DESCRIPTION:** Underpass Wall Concrete

- 1.01 The work shall consist of removal and disposal of unsound structural concrete and placement of architectural, exposed shotcrete where indicated in the contract documents and where ordered by the Engineer. The Contractor has the option of using either the Dry Mix Process or the Wet Mix Process. A visual quality mock-up is also required prior to placement in order to assess finish, color, workmanship and the means and methods of placement. All work shall comply with Standard Specification 583 except as noted herein and as shown on the plans.

2. **MATERIALS:**

- 2.01 Materials used for this work shall conform to the following requirements:

<u>Part</u>	<u>Requirements</u>
Portland Cement, Types 1 or 2	701-01
Concrete Sand	703-07
Water	712-01
Wire Fabric For Concreting	709-02
Hooked Anchor Bolts	ASTM F1554 Grade 55
Quilted Covers (for Curing)	711-02
Plastic Coated Fiber Blankets	711-03
Membrane Curing Compound	711-05

- A. The wire fabric shall be galvanized in accordance with ASTM A641M regular coatings. Wire used shall have a minimum yield strength of 35 ksi.
- B. Shotcrete mix shall be developed to closely match ceiling concrete color. Dye shotcrete as necessary using pigments in accordance with ASTM C979.

3. **CONSTRUCTION DETAILS:**

- 3.01 Qualifications and Mock-up

- A. **Qualifications of Contractor.** The installation of all shotcrete work shall be completed by a specialty contractor skilled in shotcrete work. The Contractor shall submit the appropriate qualifications for approval 45 days prior to production work. Potential specialty contractors shall submit the following:
1. A signed statement of experience certifying that the specialty contractor is an established business with a minimum of five (5) years' experience and indicate in detail experience in successfully constructing architectural shotcrete.
 2. Photographic proof and reference material for evaluation of experience and ability to perform, including photographs to show the contractor's capabilities to construct smooth architectural finishes exposed to view and also including a list of completed projects and references which demonstrate these capabilities. These projects and photographs must have been the work of those workers proposed for this work.
 3. Full documentation of the crew, including resumes of lead personnel, lists of specific personnel to be used, and details of each listed person's experience and abilities to perform all phases of construction to the Engineer's satisfaction. Submit, as proof, written documentation of the

ITEM 583.17340125 – SHOTCRETE COVERING FOR SECANT PILE WALLS

finishers and nozzlemen's qualifications. Minimum qualifications include experience on at least three projects in the past three years in similar shotcrete application work.

B. Visual Quality Mock-up. This work consists of construction of a visual quality standard panel for evaluation which will be the basis for acceptance of production work. Visual quality mock-ups shall require approval of the Engineer. This mock-up is in addition to the qualification test specified in 583-2.02. The Contractor shall construct a minimum 6 x 6 foot mock-up panel in accordance with the requirements for the actual production work. Mock-ups that do not comply with the requirements for production work and which cannot be used to evaluate the desired aesthetic effects will be rejected. The Contractor shall reconstruct new mock-ups at no additional cost to the Owner. The mock-up shall be completed a minimum of thirty days before the production work starts. Crews shall use the same equipment, materials, mix design and application procedures to construct the mock-up as proposed for the project production work. The mock-up shall meet the following requirements:

1. Foundations and other means and methods to support and stabilize the mock-up are the responsibility of the Contractor.
2. Reinforcement shall be placed in the panel to provide a minimum 1 1/2 inch (front and rear) embedment and be of the same size and spacing encountered in the structure.
3. Panels shall be shot in the vertical position.
4. After setting, the mock-up panel shall be evaluated by the Engineer. Finish shall be very smooth with minimal signs of tooling.
5. Shotcrete work shall not proceed until the mock-up is approved by the Engineer. The mock-up shall be retained at a location near to the underpass as a reference standard for the completed work.
6. Additional qualification and mock-up panels will be required whenever, in the opinion of the Engineer, the shotcrete operation significantly changes.

3.02 **Finished product.** In addition to evaluation of cores, the finished product shall be in reasonably close conformance with the approved mock-up as determined by the Engineer.

4. METHOD OF MEASUREMENT:

4.01 The quantity to be paid for under this item will be the number of square feet of finished shotcrete installed. Measurement will be taken as the plane projection of the finished surface. Measurement shall be made prior to the placement of shotcrete.

5. BASIS OF PAYMENT:

5.01 The unit price bid per square foot shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.

Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
583.17341025	Shotcrete Covering for Secant Pile Walls	Square Foot

ColorGraz MX4 Powercore

Underpass Lighting

Date: _____
Type: _____
Firm Name: _____
Project: _____

RGBA, 60° x 30° Beam Angle, 1219 mm (4 ft)

Linear exterior LED wall grazing luminaires with RGBW or RGBA light

ColorGraz MX4 Powercore is a high-performance, exterior linear luminaire designed to highlight architectural features ranging from surface textures and molding details to archways and windows. Graze RGBW luminaires add a separate white LED creating better-quality whites compared to RGB. Graze RGBA luminaires add a separate amber LED which expands the available range of colors to include warmer tones such as rich gold, yellow, and orange shades. Multiple fixture lengths, and beam angles support a large range of façade or surface illumination applications. Low-profile housing, connectorized cabling, a universal power input range, and direct line voltage operation make Graze luminaires easy to install and operate.



- Tailor light output to specific applications—Available in four standard lengths (1 ft, 2 ft, 3 ft, and 4 ft), and five standard 9° x 9°, 10° x 60°, 15° x 30°, 30° x 60°, and 60° x 30° beam angles.
- Flexible integration—Graze's ultra-low profile lets it fit discretely into almost any layout, from simple to elaborate.
- Customizable accessories - Customize your Graze fixture with a choice of three accessories: mounting arm, masking shield, and graze louver. Mounting arm available in three sizes and three colors (black, white, and gray), and masking shield available in four lengths (1 ft, 2 ft, 3 ft, and 4 ft).
- Integrates patented Powercore technology that controls power output to luminaires directly from line voltage – rapidly, efficiently, and accurately. The Color Kinetics Data Enabler Pro merges line voltage with control data and delivers them to luminaires over a single standard cable, dramatically simplifying installation and lowering total system cost.
- Graze provides years of reliable use under rugged conditions. Graze raises reliability even further with more protection from corrosion by meeting ASTM B117 standard and ANSI C136.31-2010 standard with a 3G vibration rating, and elimination of water pooling on the lens.
- Works seamlessly with the Color Kinetics full range of controllers, including Light System Manager, Video System Manager, Video System Manager Pro, iPlayer 3, Antumbra iColor Keypad, and ColorDial Pro—as well as third-party controllers.
- Convenient push-and-click connectors let you easily and rapidly install Leader Cables and Jumper Cables. Constant torque locking hinges offer simple and consistent position control from various angles.

For detailed product information, please refer to the ColorGraz MX4 Powercore Product Guide at www.colorkinetics.com/lis/rgb/colorgraze-mx4-powercore/

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Output

Beam Angle	60° x 30°
Lumens†	2,244
Efficacy (lm/W)§§	31
LED Channels	Red/Green/Blue/Amber

Electrical

Input Voltage	100 to 277 VAC, auto-ranging, 50/60 Hz
Power Consumption	74 W
(Maximum at full output, steady state)	

For Surge Protection Requirements for LED Lighting Systems, please refer to www.colorkinetics.com/KB/surge-protection.

Control

Interface	Data Enabler Pro (DMX or Ethernet)
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Control System

Color Kinetics full range of controllers, including Light System Manager, Video System Manager Pro, iPlayer 3, Antumbra iColor Keypad, and ColorDial Pro, or third-party controllers

Remote Monitoring & Management	ActiveSite Ready, works with Interact Landmark
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Lumen Maintenance

Threshold§	Ambient Temperature	Reported¶	Calculated¶
L ₇₀	25 °C	70,000	> 100,000
	50 °C	65,000	> 100,000
L ₅₀	25 °C	75,000	
	50 °C	70,000	

Physical

Dimensions (Height x Width x Depth)	69 x 1219 x 72 mm (2.7 x 48 x 2.85 in)
Weight	4.2 kg (9.3 lb)
Housing Material	Extruded anodized aluminium
Lens	Clear UV-protected polycarbonate
Luminaire Connections	Integral male/female waterproof connectors
Specs Mounting Title	Multi-positional, constant torque locking hinges

Temperature Ranges

-40 to 50 °C (-40 to 122 °F) Operating
-20 to 50 °C (-4 to 122 °F) Startup
-40 to 80 °C (-40 to 176 °F) Storage

Vibration Resistance

Not compliant to ANSI C136.31, 3G. Special orders are available to conform to the standard. Please contact your Color Kinetics Lighting Sales rep for custom configurations.

Mechanical Impact	IK10
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Corrosion Resistance

Complies with ASTM B117 standard with special order. Please contact your Color Kinetics Lighting Sales rep for custom configurations.

Humidity	0 to 95%, non-condensing
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Luminaire Run Lengths

To calculate luminaire run lengths and total power consumption for your specific installation, download the Configuration Calculator from www.colorkinetics.com/support/install_tool/

Certification and Safety

Approbation	UL/cUL, FCC Class A, CE, PSE, CQC, C-Tick
Environment	Dry/Damp/Wet Location, IP66



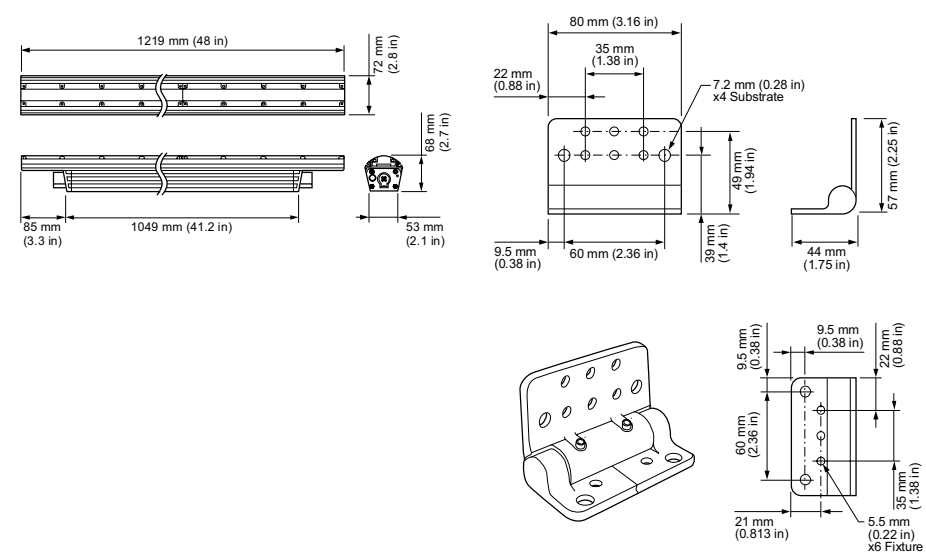
† 305 mm (1 ft) lumen output measurements comply with IES LM-79-08 testing procedures. 610 mm (2 ft), 914 mm (3 ft), and 1219 mm (4 ft) measurements are estimated based on the 305 mm (1 ft) measurements.

§ Lxx = xx% lumen maintenance (when light output drops below xx% of initial output). All values are given at B10, or the median value where 90% of the LED population is better than the reported or calculated lumen maintenance measurement.

¶ Lumen maintenance figures are based on lifetime prediction graphs supplied by LED source manufacturers. Whenever possible, figures use measurements that comply with IES LM-80-08 testing procedures. In accordance with TM-21-11, Reported values represent the interpolated value based on six times the LM-80-08 total test duration (in hours). Calculated values represent time durations that exceed six times the total test duration.

§§ Efficacy measurements are estimated based on the 305 mm (1 ft) measurements.

Dimensions



Photometrics, 305 mm (1 ft), 60° x 30° beam angle

Photometric data is based on test results from an independent NIST traceable testing lab. IES data is available at www.colorkinetics.com/support/ies.

Beam Angle	60° x 30°
LED	RGBA
Lumens	561
Efficacy (lm/W)	31

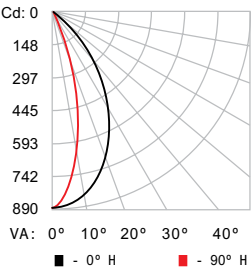


Illuminance at Distance

Center Beam fc	Beam Width
4 ft	55 fc 5.2 ft 2.1 ft
8 ft	14 fc 10.5 ft 4.3 ft
12 ft	6 fc 15.7 ft 6.4 ft
16 ft	3 fc 21.0 ft 8.5 ft
20 ft	2 fc 26.2 ft 10.7 ft
24 ft	1 fc 31.5 ft 12.8 ft

29.8 ft (9.1 m)
1 fc maximum distance
Vert. Spread: 66.5°
Horiz. Spread: 29.8°

Polar Candela Distribution



Cd: 0	0	25	45	70	90
0	886	886	886	886	886
5	875	862	841	816	811
15	794	709	581	463	433
25	631	464	276	159	136
35	395	224	94	43	36
45	177	81	30	17	15
55	57	26	13	10	9
65	15	9	6	6	6
75	4	3	2	2	3
85	2	1	1	0	0
90	1	1	0	0	0

Zonal Lumen

Zone	Lumens	% Fixture
0 - 60	548.7	97.7 %
60 - 90	12.3	2.2 %
0 - 90	561.0	99.9 %

Coefficients of Utilization - Zonal Cavity Method

RCC %:	80	70	50	30	10	0
RW %:	70	50	30	10	0	0
RCR: 0	119	119	119	119	119	119
1	113	110	108	105	111	108
2	107	102	98	95	105	101
3	102	95	90	86	100	94
4	97	89	83	79	95	88
5	92	83	78	73	90	82
6	87	78	72	68	86	78
7	83	74	68	64	82	73
8	79	70	64	60	78	69
9	76	66	60	56	75	66
10	72	63	57	53	71	62

For lux multiply fc by 10.7

Luminaire and Accessories

Use Item Number when ordering in North America

Luminaire	Item Number	Item 12NC
ColorGraz MX4 Powercore <i>RGBA, 60° x 30° Beam Angle, 1219 mm (4 ft)</i>	423-000002-19	910503704721
Accessories		
Inground Enclosure, Outer Box for 1219 mm (4 ft) luminaire	120-000190-07	912400133691
Inground Enclosure, Inner Box for 1219 mm (4 ft) luminaire	120-000190-06	912400133690
Leader Cable with Terminator, UL/cUL, 3 m (10 ft)	108-000055-03	910503704066
Leader Cable with Terminator, UL/cUL, 15.2 m (50 ft)	108-000055-00	910503703137
Leader Cable with Terminator, CE/PSE, 3 m (10 ft)	108-000055-07	910503705065
Leader Cable with Terminator, CE/PSE, 15.2 m (50 ft)	108-000055-06	910503705064
Jumper Cable, UL/cUL, End-to-End	108-000057-00	910503703139
Jumper Cable, UL/cUL, 305 mm (1 ft)	108-000057-03	910503704076
Jumper Cable, UL/cUL, 1.5 m (5 ft)	108-000057-06	910503704079
Jumper Cable, UL/cUL, 3 m (10 ft)	108-000057-09	910503704082
Jumper Cable, CE/PSE, End-to-End	108-000057-01	910503704074
Jumper Cable, CE/PSE, 305 mm (1 ft)	108-000057-04	910503704077
Jumper Cable, CE/PSE, 1.5 m (5 ft)	108-000057-07	910503704080
Jumper Cable, CE/PSE, 3 m (10 ft)	108-000057-10	910503704083
Glare Shield, 1219 mm (4 ft)	120-000081-03	910503700748
Mounting Arm, Short, Gray	120-000201-03	912400135843
Mounting Arm, Medium, Gray	120-000201-04	912400135844
Mounting Arm, Long, Gray	120-000201-05	912400135845
Symmetric Louver, 1219 mm (48 in)	120-000202-03	912400135852
Masking Shield, 1219 mm (48 in)	120-000203-03	912400135860
Power/Data Supplies		
Data Enabler Pro, 3/4 in / 1/2 in NPT (U.S. trade size conduit)	106-000004-00	910503701210
Data Enabler Pro, PG21/PG13 (metric size conduit)	106-000004-01	910503701211



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Color Kinetics
www.colorkinetics.com/ls/rgb/colorgraze-mx4-powercore/